Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

Permit Evaluation
and
Statement of Basis
for
MAJOR FACILITY REVIEW PERMIT

for

Valero Benicia Asphalt Plant
Facility #B3193

Facility Address:
3001 Park Road
Benicia, CA 90748-1257

Mailing Address:
3001 Park Road
Benicia, CA 90748-1257

TABLE OF CONTENTS

Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility it is associated with Facility B2626, Valero Refining, which has the "potential to emit," as defined by BAAQMD Regulation 2-6-218, of more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility number that consists of a letter and a 4-digit number. This facility number is also considered to be the identifier for the permit.

B. Facility Description

The Valero Benicia Asphalt Plant is a small-scale petroleum refinery that primarily produces asphalt from crude oil. The by-products-naphtha, kerosene, and gas oil-are transferred to the adjacent Valero fuel refinery or sold to other companies for the production of other petroleum products.

The processes used at the facility are: distillation, vacuum distillation, blending, organic liquid storage, asphalt storage, organic liquid loading, and asphalt loading.

A detailed description of petroleum refinery processes and the resulting air emissions may be found in Chapter 5 of EPA's publication AP-42, Compilation of Air Pollutant Emission Factors. This document may be found at:

http://www.epa.gov/ttn/chief/ap42

This document contains descriptions of tank and their emissions and combustion units and their emissions.

The principal sources of air emissions from this refinery are:

- Combustion units (furnaces, boilers, and incinerators)

- Storage tanks
- Fugitive emissions from pipe fittings, pumps, and compressors
- Wastewater treatment facilities

Combustion unit emissions are generally controlled through the use of burner technology, steam injection, or selective catalytic reduction. Storage tank emissions are controlled through the use of add on control and or fitting loss control. Fugitive emissions have been controlled through the use of inspection and maintenance. Wastewater treatment facilities are controlled by covering units, gasketing covers, and add on controls, such as carbon canisters. Caustic scrubbers control the H2S in the refinery gas from the crude distillation.

C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order that they are presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

Condition I.J has been added to clarify that the capacity limits shown in Table II-A are enforceable limits.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24 or S-24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons of a "regulated air pollutant," as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Rule 2-6-210, per year.

This facility has no sources that are significant but do not require District permits pursuant to BAAQMD Rule 2-1-302.

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in this table but will have an "S" number. An abatement device that is also a source (such as a thermal oxidizer that burns fuel) will have an "A" number.

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District's regulations. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Following are explanations of the differences in the equipment list between the time that the facility originally applied for a Title V permit and the permit proposal date:

The names of A4 and A31 have been changed from "flare" to "thermal oxidizer." These control devices are not flares and are not subject to flare requirements.

S26, Skimmed Oil Tank, is actually two tanks. One is controlled by a carbon absorber, the other by an incinerator. The source has been split into two sources. The new source is S67, Recovered Oil Tank.

The facility has lost an exemption for a 215-hp diesel fire pump. This source will be added as S68, Emergency Diesel-powered Firewater Pump.

S65, Asphalt Tank, was added in 2001 pursuant to Application #237.

The following sources and abatement devices were permitted pursuant to Application #17687:

S13, Fixed Roof Storage Tank
S59, Fixed Roof Storage Tank
A21, Carbon Canister
A22, Carbon Canister
A23, Carbon Canister
A24, Carbon Canister

The following sources were permitted pursuant to Application #17825:

S31, Rail Car Loading Rack
S37, Fixed Roof Tank
S38, Fixed Roof Storage Tank

S3, Fixed Roof Storage Tank, was permitted pursuant to Application #18555.

The following sources and abatement devices were permitted pursuant to Application #19005:

S61, Asphalt Storage Tank
S62, Asphalt Storage Tank

S63, Asphalt Storage Tank, was permitted pursuant to Application #19093.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound), are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered significant sources pursuant to the definition in BAAQMD Rule 2-6-239.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) listed following the corresponding District Rules. SIP rules are District rules that have been approved by EPA into the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portions of the SIP rule are cited separately after the District rule. The SIP portions will be federally enforceable; the non-SIP versions will not be federally enforceable, unless EPA has approved them through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All

monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations

The facility (Valero Asphalt) is subject to certain requirements because it is owned by Valero Refining Company. The facility is also contiguous to the Valero Refining Company facility in Benicia. Based on the definition of facility in Regulation 2-6-206, facilities that are under the same ownership or control and that are located on contiguous property are considered to be the same facility for Federal Clean Air Act purposes.

The facility was formerly the Huntway Refining Facility. It was purchased by Valero Refining Company on June 1, 2001. Since the facilities have historically been separate facilities, Valero Asphalt will receive a separate Title V permit. However, since they are actually considered to be one facility, Valero Asphalt is subject to several requirements to which Valero Refining is subject. The areas of greatest impact are in the wastewater and in the fugitive requirements.

Fugitive Regulations:

Due to the association with Valero Refining explained above, Valero Asphalt is subject to:

40 CFR 60, Subpart VV
40 CFR 61, Subpart FF
40 CFR 63, Subpart CC

S66, Oil-water Separator, is not subject to QQQ, because 40 CFR 63, Subpart CC overrides 40 CFR 60, Subpart J.

The facility is not subject to 40 CFR 61, Subpart V because 40 CFR 63, Subpart CC overrides 40 CFR 61, Subpart V in accordance with 40 CFR 63.640(p) and because the facility is not subject to 40 CFR 61, Subpart J.

The facility is not subject to 40 CFR 60, Subpart GGG because 40 CFR 63, Subpart CC overrides 40 CFR 60, Subpart GGG in accordance with 40 CFR 63.640(p).

The only source subject to 40 CFR 60, Subpart QQQ is S66, Oil-Water Separator, which is also subject to 40 CFR 63, Subpart CC. Subpart CC overrides 40 CFR 60, Subpart QQQ in accordance with 40 CFR 63.640(o)(1).

The facility is not subject to 40 CFR 61, Subpart J, because no stream contains 10% benzene.

The facility is not subject to 40 CFR 63, Subpart CC, Section 63.642(g) because they will use the option of controlling each stream to MACT standards in accordance with 63.642(k)(2).

S1, S2, S4, S23, Crude Storage Tanks:

The storage tanks are not subject to most of the provisions in 40 CFR 63, Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries because they are subject to 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage

Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

Tanks that are subject to 40 CFR 60, Subpart Kb pursuant to 40 CFR 63.110(b) are only subject to 40 CFR 63.640(n)(8) pursuant to 40 CFR 640(n)(1).

Wastewater

The Wastewater treatment plant equipment, which is subject to 40 CFR 63, Subpart CC shall comply with the equipment leak standards set forth in 40 CFR 61, Subpart FF.

Per 40 CFR 63.640 (o)(1), the wastewater oil-water separator (S66), which is also subject to 40 CFR 60, Subpart QQQ, shall comply only with the wastewater provisions of 40 CFR 63, Subpart CC (Part 61, Subpart FF).

The facility is not subject to the ammonia portion of BAAQMD 9-1-313.2 because no ammonia is used or produced at this facility.

Regulation 8, Rule 2, Miscellaneous Operations

The District has determined that the definition of "miscellaneous operation" in Regulation 8-2-201 excludes sources that are in a source category regulated by another rule in Regulation 8, even if they are exempt from the other rule. This is because such sources limited by the terms of the exemption. Thus, for example, a hydrocarbon storage tank that stores liquids with a vapor pressure less than 0.5 psia is exempt form Regulation 8, Rule 5, Storage of Organic Liquids (8-5-117), and is not subject to Regulation 8, Rule 2, Miscellaneous Operations.

The policy justification for this determination is that the Board considered appropriate controls for the source category when it adopted the rule governing that category. Part of the consideration includes determination of sources and activities that are not subject to controls.

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

"409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted."

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit only contains elements 2-6-409.10.1 and 2-6-409.10.2.

The BAAQMD Compliance and Enforcement Division conducted a review of compliance over the past year. The facility had two notices of violation for the H2S content of the refinery fuel gas. Four complaints of odors and one complaint of visible emissions were received. No complaints were confirmed. Note that Regulation 7, "Odorous Substances," does not apply until a facility has received complaints from 10 or more complainants within a 90-day period. There are no indications of continuing non-compliance.

The BAAQMD finds that reasonable intermittent compliance can be assured at this facility for the review period. The compliance report is contained in Appendix A of this permit evaluation and statement of basis.

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and as appropriate, revised the conditions for clarity and enforceability. Some conditions have been deleted because they reiterate an applicable requirement that is now contained in Section IV, Source-Specific Applicable Requirements. Each permit condition is identified with a unique numerical identifier, up to five digits.

Where necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

All changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all 'strike-out" language will be deleted; all "underline" language will be retained, subject to consideration of comments received.

The existing permit conditions are generally derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). It is also possible for permit conditions to be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

Conditions that are obsolete or that have no regulatory basis have been deleted from this permit.

The regulatory basis has been referenced following each condition. The regulatory basis may be a rule or regulation. The District is also using the following codes for regulatory basis:

- BACT: This code is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.

- Cumulative Increase: This code is used for a condition imposed by the APCO which limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This code is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This code is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- TRMP: This code is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.

Temperature monitoring has been added for each of the following abatement devices: S24, A4, and A31. Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

Following is the detail of other changes to permit conditions:

Condition 1240, Parts I.5 and I.6 have been amended to exclude the emergency diesel-powered firewater pump, which was previously exempt from permitting.

The Regulation 9 citation in Condition 1240, Part I.16 has been corrected

Condition 1240, Part I.17 has been deleted because the source testing has been completed.

Condition 1240, Part II.6 has been amended to clarify that it applies to S32, LGO Stripper, as well as S18, Crude Unit.

Condition 1240, Part II.64a has been amended to make explicit that all materials loaded at S15, Loading Rack, are transferred from Tanks S13, S59, or S63. Since the permit holder will perform monitoring to demonstrate that the organic liquid in these tanks has a vapor pressure that is below 1.5 psia, the facility will not have to sample the organic liquid at S15, Loading Rack.

Condition 1240, Part III.2 has been amended to ensure compliance with the 2.9% sulfur limit although deliveries are not made by a dedicated ship.

Condition 1240, Parts III.7 and III.8 have been added to assure that the facility will not be subject to Regulation 8, Rule 44, since the facility does not have vapor recovery for marine loading.

Condition 1240, Parts II.27b and II.58a have been deleted because they are obsolete. Since the applicable requirements are now in Section IV, a separate permit condition is no longer needed.

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements that apply to each source. The summary includes a citation for each monitoring requirement,

frequency, and type. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided when no monitoring is proposed due to the size of a source. In all other cases, the column will have "N/A", meaning "Not applicable".

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements**.** It follows that, although Title V calls for a re-examination of all monitoring**,** there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation**.** Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate**.**

A summary of all monitoring is contained in Section VII, Applicable Limits and Compliance Monitoring Requirements, of the permit. The summary includes a citation for each monitoring requirement, frequency, and type. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below show the limits that, prior to incorporation in the Title V permit, lack periodic monitoring requirements or limits for which the existing monitoring is inadequate.

Additional monitoring, if any, imposed pursuant to Title V is shown in the last column. The basis for each decision to require additional monitoring is presented in the discussion following each table. Applicable limits not shown in the following tables have adequate monitoring, and so no additional monitoring is being proposed in the Title V permit.

NOX Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S19, Process Heater, S20, S21, Boilers	BAAQMD 9-10-303	Refinery-wide emissions: 0.20 lbs NOx/MMBTU	None. This is a temporary interim limit which expires on 7/1/02
Facility, S19-S21, S24, S34, A4, A31	BAAQMD Condition 1240, part I. 5 and I.14	Emissions of NOX < 40 tons per year excluding marine emissions	Calculations and records
S24, S34, A4, A31	BAAQMD Condition 1240, part I.5	Maximum heat input to all refinery combustion units < 88.6 MMbtu/hr	fuel meters and recordkeeping

NOx Discussion:

Every source at the refinery that is subject to a NOx limit is also subject to NOx monitoring. These monitoring requirements come either from Regulation 9-10, existing permit conditions, or both. For more detailed information on this matter, see Table VII. Sources that are subject to this rule are found in the tables in Section VII Applicable Limits and Compliance Monitoring Requirements of the permit.

BAAQMD Regulation 9, Rule 10 "Inorganic Gaseous Pollutants: NOx and CO from Boilers, Steam Generators and Process heaters in Petroleum Refineries"

Regulation 9-10-502 requires continuous emission monitoring systems (CEMS) or "equivalent" verification systems to demonstrate compliance with Regulation 9, Rule 10. A BAAQMD Policy Memorandum, dated June 23, 2000, outlines in detail, emission monitoring requirements for petroleum refinery heaters, furnaces, and boilers that are subject to the rule. Exact monitoring requirements for NOx are dependent upon emission control devices in use, firing rate, and source test results. The District Policy is contained in Appendix B. Sources that are subject to this rule are found in the tables in Section VII, Applicable Limits and Compliance Monitoring Requirements, of the permit.

No additional monitoring will be imposed for the limits that will expire before the issuance of the Title V permit.

Heat Input

Most of the heat input to the refinery comes from natural gas. The facility has relied on their main natural gas meter to determine the overall heat input. The requirement for a refinery fuel gas meter has been added to the permit to assure compliance with the limit.

Refinery-wide NOx limit

The refinery is subject to a facility-wide permit condition that limits emissions on oxides of nitrogen to less than 40 tons per year excluding emissions at the loading dock. Permit condition I.18 has been added to require the facility to determine compliance by calculating the emissions for each source and summarizing the calculations on a semi-annual basis. The calculations use either measured or maximum fuel rates and measured or standard emission factors. The District's annual estimate of the actual emissions is 24 tons per year or less, so this level of monitoring is adequate.

CO Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S19, Process Heater, S20, S21, Boilers	BAAQMD 9-10-305	400 ppmv (dry, 3% O_2)	source test every six months

CO Discussion:

Every source at the refinery that is subject to a CO limit is also subject to CO monitoring. These monitoring requirements come either from Regulation 9-10, existing permit conditions, or both. For more detailed information on this matter, see Table VII. Sources that are subject to this rule are found in the tables in Section VII Applicable Limits and Compliance Monitoring Requirements of the permit.

BAAQMD Regulation 9, Rule 10 "Inorganic Gaseous Pollutants: NOx and CO from Boilers, Steam Generators and Process heaters in Petroleum Refineries"

Regulation 9-10-502 requires continuous emission monitoring systems (CEMS) or "equivalent" verification systems to demonstrate compliance with Regulation 9, Rule 10. A BAAQMD Policy Memorandum, dated June 23, 2000, outlines in detail, emission monitoring requirements for petroleum refinery heaters, furnaces, and boilers that are subject to the rule. Exact monitoring requirements for CO are dependent upon emission control devices in use, firing rate, and source test results. The District Policy is contained in Appendix B. Sources that are subject to this rule are found in the tables in Section VII Applicable Limits and Compliance Monitoring Requirements of the permit.

SO_2 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Facility, S19-S21, S24, S34, A4, A31	BAAQMD Condition 1240, part I.14	Emissions of SO2 < 28 tons per year excluding marine emissions	None
S30	BAAQMD Condition 1240, part III.2	2.9% S in fuel oil burned by vessels	Recordkeeping pursuant to Condition #1240, III.9
S68	BAAQMD 9-1-304	0.5% sulfur by weight	fuel oil certification
	BAAQMD Condition 18796, part 1	0.05% sulfur by weight	fuel oil certification
Facility	BAAQMD 9-1-302	General emission standard: < 300 ppm SO2 (applies only to gas-fired equipment when GLMs are not functioning)	Not recommended

SO2 Discussion:

Discussion:

All facility combustion sources are subject to the SO2 emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). Area monitoring to demonstrate compliance with the ground level SO2 concentration requirements of Regulation 9-1-301 has been required by the APCO (per BAAQMD Regulation 9-1-501). No monitoring is required for BAAQMD Regulation 9-1-302 because it only applies when the ground level monitors (GLMs) are not operating, which is infrequent.

Per CAPCOA/ARB/EPA Agreement, compliance with fuel sulfur limits in Condition 18796, Part 1, and BAAQMD Regulation 9-1-304 will be assured by certification by fuel supplier for each fuel delivery. California Diesel Fuel shall not exceed a sulfur content of 0.05 %, by weight. Certification may be provided once for each purchase lot, if records are also kept of the purchase lot number of each delivery.

No monitoring has been added to assure compliance with the facility SO2 limits in Condition 1240, Part I.14 because the margin of compliance is high. Following are the calculations of the facility's potential to emit for SO2:

SO2 is created when fuels containing sulfur are burned and the sulfur combines with oxygen to produce SO2. The facility has the following gaseous-fueled sources: S19-S21, S24, S34, A4, and A31. These sources are limited to an hourly heat input rate of 88.6 MMbtu/hr. S19 may burn refinery fuel gas that has a limit of 10 ppm H2S on a 24-hour basis. This limit is monitored by a continuous H2S monitor. S19 and all of the above sources also burn natural gas. The PUC

specification for natural gas is 5 grains sulfur/100 cubic feet or about 160 ppm sulfur. This is the worst-case assumption because the specification is higher than the sulfur content of the refinery fuel gas. Therefore, the potential to emit will be calculated assuming that the gaseous-fueled sources exclusively burn natural gas.

One grain is 1/7000 lb. The weight of SO2 produced is approximately two times the amount of sulfur in the fuel. One cubic feet (cf) of gas contains approximately 1050 btu.

Using the above assumptions to calculate the SO2 produced by the gaseous-fueled sources:

(88.6 MMbtu/hr) x (1 cf natural gas/1050 btu) x (5 grains S/100 cf natural gas) x (1 lb S/7000 grains S) x (2 lb SO2/1 1b S) x (8760 hr/yr) x (1 ton/2000 lb) = 5.3 tons SO2/yr

The facility also has one diesel-powered source: S68. The source is a 215-hp emergency standby engine for a firewater pump. A permit was recently issued pursuant to Application #4202. The engine is limited to using diesel fuel with a sulfur content of 0.05%. At this sulfur limit, the SO2 emission factor is 0.0004 lb SO2/hp-hr. The potential to emit calculation will use the EPA's guidance memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995. Emergency generators are similar sources. The memorandum states that these sources are not likely to run, even in a worst case, more than 500 hours per year. Therefore, the potential to emit calculation will be based on 500 hours per year.

(500 hr/yr) x (215 hp) x (0.0004 lb SO2/hp-hr) x (1 ton SO2/2000 lb S02) = 0.022 ton/yr

The maximum potential to emit for SO2 is approximately 5.3 tons/yr. Since the potential to emit is less than 20% of the limit of 28 tons/yr, no additional monitoring is necessary to ensure compliance.

Particulate Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S5-S8, S24, S31, S37, S38, S51, S52, S53, S54, S60, S61, S62, S65, A31	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Temperature monitoring pursuant to Condition 1240, part II.58b
S5-S8, S24, S31, S37, S38, S51, S52, S53, S54, S60, S61, S62, S65, A31	BAAQMD 6-310	0.15 grains/dscf	Temperature monitoring pursuant to Condition 1240, part II.58b

Particulate Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S17, A4	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	Temperature monitoring pursuant to Condition 1240, part II.19
S17, A4	BAAQMD 6-310	0.15 grains/dscf	Temperature monitoring pursuant to Condition 1240, part II.19
S19, S20, S21, S34	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	No monitoring per CAPCOA/ARB/EPA monitoring agreement for gas fired units
S19, S20, S21, S34	BAAQMD 6-310.3	0.15 grains/dscf @ 6% oxygen	No monitoring per CAPCOA/ARB/EPA monitoring agreement for gas fired units
S68	BAAQMD 6-301	Ringelmann 1 for more than 3 minutes in any hour	None
S68	BAAQMD 6-310	0.15 grains/dscf	None

PM Discussion:
BAAQMD Regulation 6-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. No monitoring is required for sources that burn gaseous fuels exclusively, per the EPA's June 24, 1999 agreement with CAPCOA and ARB titled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP".

No additional monitoring will be imposed for S68, Emergency Diesel-Powered Firewater Pump because it is used for emergencies and reliability testing only.

Temperature monitoring has been imposed for all other sources that are subject to BAAQMD Regulation 6. This is the same monitoring that is imposed for particulates from certain processing equipment by the NSPS, 40 CFR 60, Subpart UU, Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (8/6/82).

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Facility	BAAQMD Condition 1240, part I.14	Emissions of NMHC < 49.1 tons per year excluding marine emissions	Calculations and records
S3	BAAQMD Condition 1240, part II.43	98.5% control efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
S3	BAAQMD Condition 1240, part II.44	Fugitive emissions at vapor recovery system (S24 or A31) shall not exceed 100 ppmv	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S5	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S6	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S7	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S8	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S13	BAAQMD 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S13	40 CFR 60.112b(a) (3)(ii)	95% control of inlet VOC	Temperature monitoring pursuant to Condition 1240 II.58b
S13	BAAQMD Condition 1240, part II.31	Vapor pressure shall not exceed 1.5 psia	Annual sampling and testing
S13	BAAQMD Condition 1240, part II.32a	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S14	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.19 (Control by A4)
S14	BAAQMD Condition #1240, part II.60	98.5% destruction of vapors by weight by A4	Temperature monitoring pursuant to Condition 1240 II.19 (Control by A4)
S15	BAAQMD Condition #1240, part II.63	98.5% destruction of vapors by weight by A4	Temperature monitoring pursuant to Condition 1240 II.19 (Control by A4)
S15	BAAQMD Condition #1240, part II.64a	Vapor pressure < 1.5 psia	Annual testing of S13, S59, and S63
S16	BAAQMD Condition #1240, part II.90	Vapor pressure < 0.49 psia	None. Vapor pressure will be monitored at tanks, not at loading rack.
S16	BAAQMD Condition #1240, part II.91	25,749,000 gallons/any consecutive 12 months	Recordkeeping pursuant to Condition #1240, II.91a
S17	BAAQMD Condition #1240, part II.68	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.19
S18	BAAQMD Condition 1240, part I.14	Emissions of NMHC < 49.1 tons per year excluding marine emissions	Source test every 6 months and calculations
S18	BAAQMD Condition #1240, part I.3	98.5% destruction of vapors by weight	Source test every 6 months
S19	BAAQMD Condition #1240, part I.3	98.5% destruction of vapors by weight	Source test every 6 months
S24	BAAQMD 8-5-311.3	95% control of organic vapors	Temperature monitoring
S24	BAAQMD Condition 1240, part II.43	98.5% control efficiency	Temperature monitoring
S24	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring
S24	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S24	40 CFR 60.112b(a)(3)(ii)	95% control of inlet VOC	Temperature monitoring
S24	BAAQMD Condition 1240, part II.44	Fugitive emissions at vapor recovery system (S24 or A31) shall not exceed 100 ppmv	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S24	BAAQMD Condition #1240, part II.57	98.5% destruction of vapors by weight	Temperature monitoring
S24	BAAQMD Condition #1240, part II.85	98.5% destruction of vapors by weight	Temperature monitoring
S30	BAAQMD Condition 1240, part III.1	12 ships per year	Recordkeeping pursuant to Condition #1240, III.9
S30	BAAQMD Condition 1240, part III.1	Vessels less than 49 MDWT	Recordkeeping pursuant to Condition #1240, III.9
S30	BAAQMD Condition 1240, part III.6	6 barge loadings in any month: 1 barge loading in any day; barge capacity < 100,000 barrels	Recordkeeping pursuant to Condition #1240, III.9
S31	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.58b
S31	BAAQMD Condition #1240, part II.69	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S37	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S38	BAAQMD Condition #1240, II.55	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S39	BAAQMD Condition #1240, I.14	Emissions of NMHC < 49.1 tons per year for entire refinery excluding marine emissions	No monitoring required because vapor pressure of contents is negligible, therefore emissions are negligible

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S40	BAAQMD Condition #1240, I.14	Emissions of NMHC < 49.1 tons per year for entire refinery excluding marine emissions	No monitoring required because vapor pressure of contents is negligible, therefore emissions are negligible
S41	BAAQMD 8-8-307	70% combined collection and destruction efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
S41	BAAQMD Condition #1240, part I.14	77,263,000 gallons/year	Recordkeeping pursuant to Condition #1240, II.92a
S51	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S52	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S53	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S54	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.58b
S54	BAAQMD Condition #1240, part II.70	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S59	BAAQMD 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S59	BAAQMD Condition #1240, part II.32.b	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S59	BAAQMD Condition 1240, part II.31	Vapor pressure shall not exceed 1.5 psia	Annual sampling and testing
S60	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S61	BAAQMD Condition #1240, part II.57	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S62	BAAQMD Condition #1240, part II.57	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMD 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMD Condition #1240, part II.32.c	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S63	BAAQMD Condition 1240, part II.31	Vapor pressure shall not exceed 1.5 psia	Annual sampling and testing
S65	BAAQMD Condition #1240, part II.56	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
S65	BAAQMD Condition 1240, part II.53	Fugitive emissions shall not exceed 100 ppm	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18
S66	BAAQMD 8-8-301.3	95% combined collection and destruction efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
S66	BAAQMD Condition 1240, part II.86	No detectable fugitive emissions in excess of 100 ppm, measured as total organic compounds	Fugitive emissions will be monitored in accordance with Regulation 8, Rule 18

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S66	BAAQMD Condition #1240, part II.85	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
A4	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring
A4	BAAQMD Condition 1240, part II.60	98.5% control efficiency	Temperature monitoring
A4	BAAQMD Condition #1240, II.63	98.5% destruction of vapors	Temperature monitoring
A4	BAAQMD Condition #1240, part II.69	98.5% destruction of vapors by weight	Temperature monitoring
A4	BAAQMD Condition #1240, part II.68	98.5% destruction of vapors by weight	Temperature monitoring
A31	BAAQMD 8-5-311.3	95% control of organic vapors	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD 8-6-301	21 g/cubic meter (0.17 lb/1000 gallons)	Temperature monitoring pursuant to Condition 1240 II.58b
A31	40 CFR 60.112b(a)(3)(ii)	95% control of inlet VOC	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition 1240, part II.43	98.5% control efficiency	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition #1240, II.56	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition #1240, part II.69	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
A31	BAAQMD Condition #1240, part II.70	98.5% destruction of vapors by weight	Temperature monitoring pursuant to Condition 1240 II.58b
A31	BAAQMD Condition 1240, part II.85	98.5% destruction of vapors	Temperature monitoring pursuant to Condition 1240 II.58b

POC Discussion:

VOC emissions at the Valero Benicia Asphalt Plant are controlled by the following four control devices:

S19, Vacuum Heater
S24, Hot Oil Heater
A4, Loading Rack Ground Flare
A31, Incinerator

S19 and S24 are also process heaters.

S24, A4, and A31 are required to monitor the combustion temperature continuously because the sources that they control are subject to 40 CFR 60, Subpart Kb; 40 CFR 60, Subpart UU; or 40 CFR 61, Subpart FF. Temperature is an indicator of compliance for the control of particulate, VOC, and organic HAPs.

S19 is not subject to temperature monitoring by regulation. 40 CFR 63, Subpart CC exempts control by process units from monitoring if the pollutants are vented into the flame zone of a process heater. A source test will be required every six months.

The refinery is subject to a facility-wide permit condition that limits emissions on non-methane hydrocarbons (NMHC) to less than 49.1 tons per year excluding emissions at the loading dock. Permit condition I.18 has been added to require the facility to determine compliance by calculating the emissions for each source and summarizing the calculations on a semi-annual basis.

HAP Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S18, S19	40 CFR 63 Subpart CC 63.643(a) (2)	Reduce HAPs by 98% or to 20 ppm @ 3% oxygen	MACT does not require additional monitoring. MACT monitoring is presumed to be sufficient.

Discussion of Other Pollutants:

H2S Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
Facility	BAAQMD 9-1-313.2	Removal of 95% of H2S in process water streams	None

Unlike larger refineries, Valero Asphalt does not introduce water into process streams because it does not have any cracking or sulfur recovery. Therefore, no additional monitoring is necessary for this requirement.

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section VI of the permit.

IX. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit that identifies and justifies specific federally enforceable regulations and standards which the APCO has confirmed are not applicable to a source or group of sources, or (2) A provision in a major facility review permit that identifies and justifies specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting which are subsumed because other applicable requirements for

monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

Compliance with the applicable requirement contained in the permit automatically results in compliance with any subsumed (= less stringent) requirement.

This facility has the first and second types of permit shield.

Following is the detail of the permit shields that were requested by the applicant.

The following permit shields have been granted to the facility:

1. S30, Marine Loading Dock, is not subject to BAAQMD Regulation 8, Rule 44 because it does not load organic liquid as defined by Section 8-44-204 (all gasoline, gasoline blending stocks, aviation gas and aviation fuel (JP-4 type) and crude oil). Conditions 1240 III.7 and 1240 III.8 have been added to the permit to ensure that the facility does not operate in a manner that would be subject to BAAQMD Regulation 8, Rule 44.

The following permit shields have been granted for the purpose of streamlining:

1. 40 CFR 60.482-2(c):
   The requirement for pump leaks above 10,000 ppm or dripping liquid: First repair attempt before 5 days and repair before 15 days.
   The requirement shall be subsumed by BAAQMD 8-18-303, which requires minimization of leak >500 ppm within 24 hours and repair within 7 days.
   The BAAQMD requirement is more stringent.

2. 40 CFR 60.482-7(d):
   The requirement for valve leaks above 10,000 ppm: First repair attempt before 5 days and repair before 15 days.
   The requirement shall be subsumed by BAAQMD 8-18-302, which requires minimization of leak >100 ppm within 24 hours and repair within 7 days.
   The BAAQMD requirement is more stringent.

3. 40 CFR 60.482-7(g):
   Allows relief from 60.482.7(a) monitoring if designated as unsafe-to-monitor.
   BAAQMD Regulation 8-18 does not allow this relief.
   The BAAQMD requirement is more stringent.

4. 40 CFR 60.482-7(h):
   Allows relief from 60.482.7(a) monitoring if designated as difficult-to-monitor.

The BAAQMD Regulation 8-18-206 definition of inaccessible is more stringent. Both 60.482.7(h) and BAAQMD 8-18-401.3 require yearly monitoring for difficult-to-monitor valves.
The BAAQMD requirement is more stringent.

5. 40 CFR 60.482-9(e):
Allows delay of repair beyond a process unit shutdown under supply circumstances. BAAQMD Regulation 8-18-306 does not allow this relief.
The BAAQMD requirement is more stringent.

6. 40 CFR 60.484:
Alternative compliance plan only requires EPA approval. BAAQMD Regulation 8-18-308 requires public notice and EPA approval of alternative compliance plan.
The BAAQMD requirement is more stringent.

7. 40 CFR 60.113b(b)(1)(i) and (ii) for S1, S2, S4, and S23, Crude Tanks:
Requires the measurement of gaps between tank wall and primary and secondary seals at least once per 5 years and at least once per year, respectively.
BAAQMD Condition 1240 II.13 requires quarterly inspection of primary and secondary tank seals, and therefore is more stringent. The permit condition has been amended to ensure that the quarterly inspections will include all items required by Regulations 8-5-401, and 8-5-402, as well as all items required by 40 CFR 60.113b(b)(1)(i) and (ii).

8. BAAQMD Regulations 8-5-401.1, 8-5-402.1, 8-5-404.1, and 8-5-040.2.1 for S1, S2, S4, and S23, Crude Tanks:
Inspection of primary and "zero-gap" secondary seals at least once every 10 years (8-5-401.1 and 8-5–404.1), and at least once per year (8-5-404.2.1).
BAAQMD Condition 1240 II.13 requires quarterly inspection of primary and secondary tank seals, and therefore is more stringent. The permit condition has been amended to ensure that the quarterly inspections will include all items required by Regulations 8-5-401, and 8-5-402, as well as all items required by 40 CFR 60.113b(b)(1)(i) and (ii).

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

A July 17, 2001 office memorandum from the Director of Compliance and Enforcement, to the Director of Permit Services, presents a review of the compliance record of Valero Benicia Asphalt Plant, Facility #A0901 (the report was prepared before the facility number was changed due to the sale of the facility). The Compliance and Enforcement Division staff has reviewed the records for Valero Asphalt for the period between June 15, 2000 through June 15, 2001. This review was initiated as part of the District evaluation of an application by Valero Asphalt for a Title V permit. During the period subject to review, activities known to the District include:

- There were two Notices of Violation issued during this review period for violation of the H2S limit in the refinery fuel gas.
- The District received four complaints for odors and one complaint for visible emissions. No complaints were confirmed.
- The facility is not operating under a Variance or an Order of Abatement from the District Board.
- There were no monitor excesses or equipment breakdowns reported or documented by District staff.

The owner certified that all equipment was operating in compliance on April 9, 1997 with all requirements except the requirement to file a Title V permit by October 24, 1995. Subsequent analysis shows that the emissions have been below 50 tons of each regulated air pollutant from 1993 to date and therefore, the facility was not actually out of compliance.

F. Differences between the Application and the Proposed Permit:

The changes to the source list can be found in Section C.II of this statement of basis.

The Title V permit application was originally submitted on April 9, 1997. This version is the basis for constructing the proposed Title V permit. Differences between the application and the proposed permit include the following:

S4, Crude Oil Tank, was converted from a fixed roof tank to an external floating roof tank pursuant to Application #366.

The permitted heat input to S19, Process Heater, was increased from 22.4 MMbtu/hr to 33 MMbtu/hr pursuant to Application #1261.

The allowable refinery throughput was increased from 3,650,000 barrels/yr to 5,292,000 barrels/yr pursuant to Application #1819.

The allowable refinery throughput was increased from 9,000 barrels/day to 18,000 barrels/day pursuant to Application #18514.

The names of A4 and A31 have been changed from “flare” to “thermal oxidizer.” These control devices are not flares and are not subject to flare requirements.

APPENDIX A
BAAQMD COMPLIANCE REPORT

APPENDIX B

BAAQMD Policy Memorandum: NOx, CO, and O2 Monitoring Compliance with Regulation 9, Rule 10

APPENDIX C
GLOSSARY

ACT
Federal Clean Air Act

APCO
Air Pollution Control Officer

ARB
Air Resources Board

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

Basis
The underlying authority which allows the District to impose requirements.

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CAPCOA
California Air Pollution Control Officers Association

CEQA
California Environmental Quality Act

CFR
The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO
Carbon Monoxide

Cumulative Increase
The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Used to determine whether threshold-based requirements are triggered.

District
The Bay Area Air Quality Management District

dscf
Dry Standard Cubic Feet

EPA
The federal Environmental Protection Agency.

Excluded
Not subject to any District regulations.

Federally Enforceable, FE
All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP
Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

HAP
Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

Major Facility
A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR
Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MOP
The District's Manual of Procedures.

NAAQS
National Ambient Air Quality Standards

NESHAPS
National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC
Non-methane Hydrocarbons (Same as NMOC)

NMOC
Non-methane Organic Compounds (Same as NMHC)

NOx
Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR
New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement
A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NOx, PM10, and SO2.

Phase II Acid Rain Facility
A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC
Precursor Organic Compounds

PM
Particulate Matter

PM10
Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD
Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP
State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO2
Sulfur dioxide

THC
Total Hydrocarbons (NMHC + Methane)

Title V
Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TPH
Total Petroleum Hydrocarbons

TRMP
Toxic Risk Management Plan

TSP
Total Suspended Particulate

VOC
Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cfm	=	cubic feet per minute
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m^2	=	square meter
min	=	minute
mm	=	millimeter
MM	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year